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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/147,428	12/22/1998	YUSUKE SHIOTA	2839-0065-3-	1707

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EXAMINER
CINTINS, IVARS C

ART UNIT	PAPER NUMBER
1724	

DATE MAILED: 08/14/2002

27

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/147,428	Applicant(s) Shiota et al.
	Examiner Ivars Cintins	Art Unit 1724

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on *May 28, 2002*.

2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *6-10, 14, 15, 19, 23, 26, 27, 29, and 30* is/are pending in the application.

4a) Of the above, claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) *6-10, 14, 15, 19, 23, 26, 27, 29, and 30* is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) ☐ All b) ☐ Some* c) ☐ None of:

1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

*See the attached detailed Office action for a list of the certified copies not received.

14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

a) ☐ The translation of the foreign language provisional application has been received.

15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____
4) ☐ Interview Summary (PTO-413) Paper No(s). _____
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other:

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 8 and 9 are again rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. Claims 8 and 9 are indefinite because the structural interrelationship between the vertical partition recited in each of these claims and the apparatus of parent claim 6 has not been clearly set forth.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless -
>
> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

Claims 6, 10, 15, 26, 29 and 30 are rejected under 35 U.S.C. 102(a) as being clearly anticipated by Gentry (U.S. Patent No. 5,601,797). Gentry discloses an apparatus comprising a packed bed of catalyst material (102), an upper support layer of ceramic (i.e. alumina) particles (104, 106), and a lower support layer of

ceramic particles (104,106); and this is all that is required by claims 6, 10, 15, 26, 29 and 30.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 7, 14 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gentry. The reference discloses the claimed invention with the exception of the particle size of the alumina balls. However, the exact size of the alumina balls utilized in the reference system is not seen to materially affect the overall operation of this reference system, or to produce any new and unexpected result; and is therefore deemed to be an obvious matter of choice in design, insufficient to patentably distinguish the claims. Applicant should note that Gentry clearly discloses (see col. 6, line 15) that such alumina balls can have "varying diameters".

Claims 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gentry in view of published European Patent Application No. 0 636 399. Gentry discloses the claimed

invention with the exception of the recited vertical partition. Published European Patent Application No. 0 636 399 discloses an apparatus comprising a particulate bed, and teaches the use of a vertical partition (see page 2, right column, lines 25-33) in order to minimize surface movements of the particulate material in the bed. It would have been obvious to one of ordinary skill in the art at the time the invention was made to substitute the vertical partition of published European Patent Application No. 0 636 399 for the "holddown grid" of Gentry (i.e. element 108), since this secondary reference vertical partition is capable of minimizing surface movement of particulate material in substantially the same manner as the holddown grid of the primary reference, to produce substantially the same results. The exact height (claim 9) and cross-sectional area (claim 8) of this vertical partition are not seen to materially affect the overall operation of the reference device, or to produce any new and unexpected result; and are therefore deemed to be obvious matters of choice in design, insufficient to patentably distinguish these claims.

Claims 23 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 96/13463 in view of Gentry. WO 96/13463 discloses a wet air oxidation unit comprising a catalytic bed reactor. Accordingly, this reference discloses the

claimed invention with the exception of the specific type of catalytic unit employed. Gentry discloses a catalytic unit of the type recited; and it would have been obvious to one of ordinary skill in the art at the time the invention was made to substitute the catalytic unit of this secondary reference for the catalytic unit of the primary reference, since this secondary reference catalytic unit is capable of promoting catalytic oxidation of contaminants in a fluid in substantially the same manner as the catalytic unit of the primary reference, to produce substantially the same results.

Applicant's arguments filed May 28, 2002 have been noted and carefully considered but are not deemed to be persuasive of patentability. Applicant argues that the alumina balls of the Gentry device have too low a specific gravity in order to function as a water-permeable pressure layer. This argument does not appear to be well founded. Applicant has disclosed (see page 23, last paragraph, of the specification) that the specific gravity of the granular substance employed need only be 2.5 or larger. Since alumina has a specific gravity ranging from 3.5 to 3.9 (see page 7, first full paragraph, of Applicant's response filed December 17, 2001), this alumina satisfies Applicant's disclosed specific gravity requirement for the granular material. Furthermore, it should be noted that Applicant also contemplates

the use of alumina (see page 24, line 16 and page 39, line 21 of the specification) as a granular material for the claimed invention.

Parker et al. (U.S. Patent No. 5,518,910) and Schick (U.S. Patent No. 5,534,152) are cited to show that alumina is a well known ceramic material. See col. 2, lines 5-6 of Parker et al.; and col. 6, lines 10-11 of Schick.

It is noted that claims 10, 26 and 29 are duplicates of one another. Applicant is advised that should claim 10 become allowable, then claims 26 and 29 would be objected to, under 37 CFR 1.75, as being duplicates of an allowed claim. See M.P.E.P. § 706.03(k).

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing

date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to I. Cintins whose telephone number is (703) 308-3840. The examiner can normally be reached on Monday through Friday from 8:30 AM to 5:00 PM.

The fax phone numbers for this art unit are: (703) 872-9311 for "Official" faxes after Final Rejection; (703) 872-9310 for all other "Official" faxes; and (703) 872-9492 for "Draft" and other "Unofficial" faxes.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-0661.

Ivars Cintins

Ivars C. Cintins
Primary Examiner
Art Unit 1724

I. Cintins
August 11, 2002